VI. ACCOMPLISHMENTS

Perhaps one of the best ways to assess the value and effectiveness of the CDF Archaeology Program is to review some of the accomplishments that have been achieved over the years. In this chapter, some of these accomplishments will be described in terms of the publications that have been produced, the comprehensive Management Plan that has been completed, the CDF properties that have been inventoried, excavations that have been conducted, and private collections that have been documented.

The sheer volume of archaeological research that has been carried out under the auspices of the CDF Archaeology Program is enormous. Just in site records alone, the quantity of basic archaeological data that has been collected will keep archaeologists busy for many years incorporating this information into the record of California's past. In the early years of the program, fewer than 100 sites were typically encountered each year during project review, and often these findings took place after sites had been impacted by logging operations or other project activities. An indication of the improvements in the effectiveness of the program is demonstrated by the number of sites that are being discovered. Currently, between 500 and 1,000 new archaeological sites are recorded each year, the majority of which are found by RPFs during THP preparation. Nearly all of these sites are identified, recorded, and protected prior to project approval. This improvement is the result of the archaeological rules that are now part of the Forest Practice Regulations, the archaeological training program, and the review procedures implemented by CDF archaeologists.

Another indication of the accomplishments of the CDF Archaeology Program is reflected in the level of annual program activity. During the year 1999, for example, approximately 2,000 projects were reviewed, over 250 field inspections and surveys were conducted, over 250 impact evaluation reports were submitted, nearly 500 archaeological sites were recorded and protected, 6 archaeological training courses were provided, 2 archaeological sites were excavated and studied, and 4 research papers were published. While the numbers of specific types of projects have fluctuated through the years, this serves as a fairly representative example of the extent of work that is typically carried out each year.

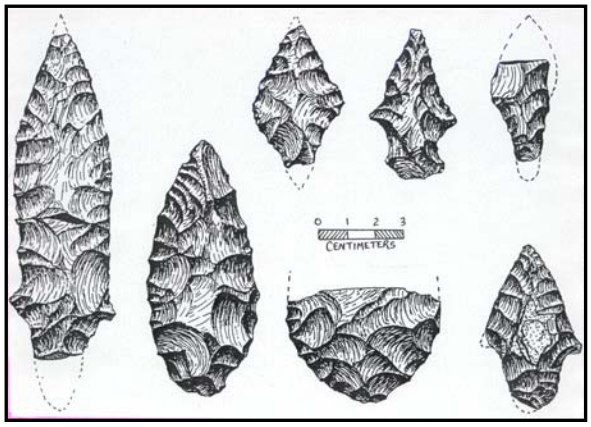
Publications

One of the most substantial contributions of the CDF Archaeology Program is the publication of the Archaeological Reports series. This series was initiated in 1988 and currently includes thirty volumes that disseminate the results of many of the major archaeological investigations undertaken by CDF. Included in this series are survey reports, state forest inventories, excavation reports, a comprehensive Management Plan, technical manuals, and reports on other research projects. The CDF Archaeological Reports series represents a major publication series on California archaeology and certainly the most important archaeological publication currently produced by a state government agency. CDF has been directed to collect, process, interpret, analyze, update, store, index, and make retrievable the array of information and data needed to support forest planning. The Department may issue publications for the purpose of disseminating information relating to its activities, powers, duties, or functions. These publications may be distributed free of charge to public libraries and other state departments and

offices (CDF 2002). Publications have been produced to make available technical information to various interest groups (CDF 1999; Foster 1992, 2000, 2003). The contributions to archaeological knowledge and other forms of information made available by the CDF Archaeology Program through publications are summarized below.

Information necessary for the protection of archaeological and historical resources was assembled in an *Archaeological Information Manual for Prescribed Burn Managers*. The procedures specified in this publication were designed to achieve compliance with CEQA, the statewide VMP-EIR, Executive Order W-26-92, and other applicable mandates and policies during the implementation of prescribed burn projects (Foster 1994).

A great many archaeological surveys have been completed as a result of CDF projects. In 1987, the Crank Fire burned approximately 3,700 acres north of Big Valley along the west slopes of Crank and Happy Camp Mountains in Modoc County. A survey of 830 acres of privately owned lands within the fire area was conducted by the Archaeological Research Program (ARP) at CSU Chico through a contract with CDF. This survey was carried out by Blossom Hamusek and Daniel McGann on March 29 through April 1, May 30 and 31, June 7, and June 27, 1988. The purpose of this investigation was to identify all cultural resources that occurred within the study area, evaluate their significance in relation to NRHP criteria, anticipate potential impacts, and make recommendations for the mitigation of these impacts. Fourteen prehistoric archaeological sites and fourteen isolated finds were documented as a resulted of this survey. Site types included seasonal task specific lithic workshops, temporary hunting base camps, and food processing stations. Diagnostic artifacts encountered suggested the primary occupation of the area extended from A.D. 500 up to historic contact (Hamusek 1988a).



Large stemmed points and bifaces found by Mark Hylkema and Jeffrey Hall on the Carney Ranch.

A proposed controlled burn project led to an archaeological survey by San Jose State University of the 5,800 acre Carney Ranch located in the southern Diablo Range of San Benito County. The goal of this survey was to identify the cultural resources within the project area and provide recommendations leading to their protection. Field reconnaissance was conducted by Mark Hylkema and Jeffrey Hall on November 18 and 19, 1988. Two large prehistoric sites were identified as a result of this survey, both containing abundant cultural evidence in the form of dark midden soils and extensive surface scatters of lithic materials. One of the sites produced an interesting assemblage of chert artifacts including a number of large, contracting-stemmed projectile points (Hylkema 1989).

Collaboration between CDF and the Kern County Fire Department resulted in the documentation of some highly significant archaeological sites. Preparations for controlled burn projects can include road and fireline construction, mechanical brush clearing, and other activities that can seriously damage cultural resources. Survey work was conducted to locate sites and implement

changes in project design in order to ensure site protection. On August 17, 1988, a survey party consisting of Dan Foster, Jack Ringer, Randy Reiswig, and Ken McElroy investigated a series of locations in the Caliente area of Kern County. Seven prehistoric archaeological sites were recorded as a result of this investigation including occupation sites, midden deposits, bedrock mortars, and rock art (Foster, Ringer, and Ciccio 1989).

Midden and bedrock mortar site disturbed by looters, recorded in 1988 during survey by CDF and KCFD.

An archaeological survey of 2,010 acres in Riverside County for the Rancho Pavoreal Prescribed Burn Project resulted in the identification and documentation of 16 previously unrecorded archaeological sites and the rerecording of one previously recorded site. Site types found on this property included large temporary camps or small villages, milling stations, and lithic scatters. This survey was conducted over an eight-day period in June and July, 1992, under the direction of Brian Dillon. Field crew members included Saul Bermudez, Richard Castro, Eulogio Guzman, Karen Kayser, Jennifer Lundal, Marcelle McGovern, Tony Medina, Jean Moore, Paul Porcasi, and Jackson Underwood. As part of this project, the relative significance of these sites was evaluated and recommendations were provided to avoid adverse impacts from the controlled burn project (Dillon 1993).

In addition to surveys, a variety of other types of research has been presented in CDF publications. Three papers on historical archaeology were compiled in a volume covering the topics of firearms and cartridges, gold mining methods, and the history of logging technology. These papers provided important background information for the identification and interpretation of some of the most common forms of historical evidence encountered in California timberlands (Dillon 1995b).

The Dillonwood Grove Site (CA-TUL-1985) is a prehistoric campsite located at an elevation of 7,000 feet on the west slope of the southern Sierra Nevada. The site consists of a lithic scatter of obsidian flakes, flaked stone tools, and several milling implements. This site was discovered in 1993 by RPF Brian Rueger during preparations for a THP. The site had been badly damaged by previous timber operations in the 1960s, having been used as a road and log landing. Under the newly proposed THP, the site area would once again be used as a haul road. An inspection of the site by CDF Archaeologist Dan Foster was conducted to assess site significance and develop management recommendations. In spite of the damage that had occurred, Foster considered the site to be significant because it possessed unique characteristics such as an unusual setting; absence of bedrock mortars, midden, or pottery often found at similar sites in the region; an artifact assemblage suggesting a possible early occupation; and was the only site on the property that still held any research potential. Foster recommended that the site be protected by avoidance or subjected to a limited archaeological investigation before any further disturbances occurred. Construction of a new road to bypass the site area proved to be unfeasible, and the landowner rejected the proposal to conduct an archaeological investigation. In order to satisfy the requirements of the Forest Practice Rules, the landowner proposed to cap the site with a fabric

membrane and a six-inch layer of fill to enable reuse of the road. This proposal was approved by CDF.

CSUB archaeological investigations at the Dillonwood Grove Site in 1996.

In order to salvage a small sample of information from this significant site, in June, 1996, the Center for Archaeological Research (CAR) at CSU Bakersfield (CSUB) conducted a limited investigation of the Dillonwood Grove site. This study received only small-scale funding from CDF and none from the landowner but conducted by CSUB anyway as a public service to archaeology. The field crew included Matthew DesLauriers, Jill Gardner, and Stacy Tisler under the direction of Robert Parr. The investigation included site mapping and a sample in-field lithic analysis. Fifteen obsidian flakes were collected for sourcing and hydration analysis. Two ground stone specimens were collected for protein residue analysis. Three quartz artifacts were also collected. The analyses of these materials suggested that the site represented a temporary camp associated with seasonal hunting and gathering forays and may have been occupied as early as 1,800 years ago with utilization extending into the late prehistoric period (Parr 1997). This case serves to demonstrate the limitations of regulatory authority that currently confront CDF in the efforts to protect archaeological sites.

Obsidian hydration analysis is considered to be one of the most important techniques for the study of chronology and integrity in prehistoric archaeological deposits. Hydration bands can, however, be damaged by fire. CDF initiated a study of the effects of prescribed fire on obsidian hydration bands through a contract with the Anthropological Studies Center at Sonoma State University. Analysis of the results of field and laboratory experiments indicated that maximum temperature and duration of exposure were the most influential factors affecting hydration bands (Solomon 2000).

The Archaeological Site Record has been recognized as the most fundamental means of obtaining and preserving information on archaeological sites. CDF identified a need for basic instruction and guidance in the preparation of professional quality site records which resulted in a site recording manual that provides advice on techniques for conducting fieldwork, drafting site maps, and preparing completed records (Betts 2001).

Management Plan

In 2001, a comprehensive Management Plan was completed for the historic buildings and archaeological sites under the administration or control of CDF. This Management Plan was developed in response to Executive Order W-26-92, CEQA, and PRC 5020 et seq. These legal mandates directed state agencies to preserve and maintain the significant heritage resources under their jurisdiction. Inventories of CDF properties were implemented to identify all known heritage resources. The significant heritage resources selected from this inventory include 260

historic buildings and 166 archaeological sites. The plan describes the specific procedures that must be followed for the management of these resources. This plan was developed in consultation with OHP and is to be updated every ten years (Foster and Thornton 2001).

The Management Plan contains a comprehensive listing of CDF's historic buildings. This list contains entries for each structure with information on the type or name of the building, the county in which it is located, the year of construction, the NRHP Status Code indicating significance, an indication of selection for preservation, and supporting references and documentation. The plan also contains an inventory of all known archaeological sites located on properties administered by CDF. This inventory includes the property name, the site trinomial, site name, site type, county in which it is located, and references. Two maps in the plan depict the distribution of these properties across the state (Foster and Thornton 2001).

As CDF facilities age, in many instances they no longer meet the operational needs of the primary responsibilities of the Department resulting in an increasing necessity for buildings to be remodeled, upgraded, demolished, or abandoned. All of these actions are considered significant impacts under CEQA. The Management Plan sets out guidelines for the entire building inventory and specifies which of these historic buildings can be feasibly preserved. The accompanying EIR provides the necessary CEQA clearance to address issues regarding other buildings as they arise (Foster and Sosa 2001).

The development of the Management Plan began in 1991. Inventories of CDF properties were conducted from 1991-1996. Drafting of the plan was begun in 1996, submitted to OHP in 1998, and distributed statewide to agencies, groups, and individuals who wished to offer comments in February 1999. The EIR was written during 1999-2000. Various factors necessitated revisions to the plan and a second draft was circulated in March 2000. The completed plan was approved and distributed in November 2001. This Management Plan is a tool to assist in safeguarding the best of CDF's archaeological and historical resources for future generations to enjoy and appreciate. This document was eleven years in the making and is the most ambitious project so far undertaken by the CDF Archaeology Program.

Inventory of CDF Properties

A major part of the Management Plan was the systematic inventory of CDF properties. Numerous surveys were implemented to identify and document the heritage resources under the control or jurisdiction of CDF. The two components of the CDF property inventory are historic buildings and archaeological sites.

Building Inventory The current CDF building inventory includes approximately 2,300 structures distributed over 375 sites. These buildings are located at forest fire lookouts, forest fire stations, administrative sites, and on state forests. Of these buildings, 260 are considered to be historic, having been constructed before 1949. Fewer than 190 of these buildings predate 1946. The majority of these structures are remnants of the CCC-WPA construction era. The old fire station buildings on Mount Zion State Forest are the only pre-CCC era suppression facilities remaining in the CDF property inventory. The Management Plan identified 86 buildings that were historically significant on both architectural and historical grounds. Seventy-eight of these

buildings were determined to be significant and eligible for listing on the NRHP and the CRHP. A list of selection criteria was developed for buildings to be preserved which included public access, condition, sample diversity, and feasibility. Twenty-nine of these buildings were selected for long-term preservation. These buildings were found to be significant because many are examples of a distinctive architectural style and they are associated with an important historical event. The development of the CDF wildland fire control system over the last century is considered to be a significant historical event in the lives of many Californians. Some of these buildings will be saved and used in their original locations, others will be relocated and restored at nearby public facilities, and some will be given to other agencies for continued management and preservation. A variety of factors impose limitations on the number of the buildings in the CDF inventory that can be preserved including the closure and abandonment of facilities, the utility of the structure, fiscal constraints, ownership and control problems, and exposure to liability. Included in the Management Plan are descriptions of each of the 29 buildings selected for preservation along with specific management recommendations to accomplish this objective (Foster and Thornton 2001).

In 1991, consulting historian Mark Thornton accepted a contract from CDF to begin conducting inventories and significance evaluations of CDF historic buildings. The first stage in this research resulted in an inventory and evaluation of 77 fire lookout stations. These properties were documented on DPR Historic Resource Inventory Forms, 35 mm black and white film, and on videotape. A volume was compiled that provides the age and historic significance of each surviving CDF lookout facility (Thornton 1993).

Former setting of CDF's 1940 Hayden Hill Lookout, relocated to a museum in Bieber in the 1990s.

Following this project, a complete statewide inventory of CDF historic buildings was undertaken. This study included historic buildings at forest fire stations, region and unit headquarters, air attack bases, conservation camps, nurseries, the CDF Academy, and other administrative sites and facilities. A complete listing of CDF buildings was compiled and construction dates were determined through archival research. Structures built prior to 1946 were identified. On-site visits were conducted at 73 locations containing 189 historic buildings. These structures were evaluated for historic significance and documented using videotape, 35 mm black and white film, and DPR Historic Resource Inventory Forms. A two-volume report was compiled that includes a complete listing of all CDF buildings and provided the date of construction and significance evaluation for each of these buildings (Thornton 1994).

State Forests CDF is responsible for the administration and management of a system of nine state forest units. The concept of a state forest system developed during the 1940s as a means to demonstrate responsible and innovative forest management practices to the private timberland owners of California. The Forest Practice Act of 1945 provided for the acquisition, administration, and operation of the state forests. Management policies for the state forests are set by the Board of Forestry while administration and implementation of these management

policies are delegated to the director of CDF. These policies direct CDF to prepare detailed management plans for the state forests and to conduct innovative programs demonstrating timber management, recreational development, investigations, experiments, and education in forest management. Several of the state forests have been identified as commercial timberlands with primary emphasis on the harvesting of forest products along with the recognition that recreation is a secondary but compatible land use. The smaller forests are used primarily for administrative and recreational purposes, while deed restrictions preclude certain activities on some forests. Timber harvesting on the larger forests is designed to be compatible with recreation, soil, water, wildlife, fisheries, and aesthetic values.

As publicly owned resources, the state forests are held in trust for the benefit of the people of California. The state legislature has specified that the public should derive benefit from the forests through management, where the term "management" is defined as "the handling of forest crop and forest soil so as to achieve maximum sustained production of high quality forest products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment" (CDF 2002:137). In addition to providing forest products, the state forests contain a variety of other resources such as prehistoric and historic archaeological sites, recreational opportunities, and aesthetic values. Managing this array of resources and values can require choices among conflicting entities, and the noncommercial values must be given consideration. This level of consideration has changed over time in response to changing perceptions, public interest, and scientific knowledge. Current policies direct forest management activities to emphasize water quality improvement and wildlife habitat protection. The importance of the state forests to demonstrate responsible forest management has intensified as the population and development pressures in California have increased the demand for forest products (CDF 2002).

The state forest system contains a large collection of cultural resources that must be managed and protected. CDF has been directed to inventory historic and prehistoric archaeological resources on the state forests and to identify and evaluate archaeological sites that are susceptible to disturbance. Data collection efforts must be prioritized and implemented prior to project activities. The fact that the state forests are publicly owned land invokes additional requirements for the protection, preservation, and stewardship of cultural resources. On state lands, California law specifies that "No person shall collect or remove any object or thing of archeological or historical interest or value, nor shall any person injure, disfigure, deface or destroy the physical site, location, or context in which the object or thing of archeological or historical interest or value is found" (CCR 1427).

One of the primary goals in the management of state forests is to improve the amount and quality of information concerning economic forest management methods available to landowners, resource professionals, the timber industry, and the general public (CDF 2002). The perception that archaeological resource protection will have deleterious financial consequences has been a serious concern for people involved with forest management. The CDF Archaeology Program has endeavored to demonstrate on the state forests that archaeological resources can be successfully protected with minimal restrictions on timber operations. In order to document these efforts and to fulfill its obligation to inventory cultural resources, CDF has published cultural resource overviews and inventories of the state forests in the CDF Archaeological

Reports series. Archaeological research projects have also been sponsored for the development of interpretive programs and to foster scientific research, two major objectives of the state forest system. The following paragraphs briefly summarize some of these investigations.

Boggs Mountain Demonstration State Forest is a 3,493-acre parcel located in Lake County in the southern portion of the North Coast Range. Portions of this property were purchased by the state in 1949, 1954, and 1972. Between 1977 and 1995, at least 11 archaeological surveys were conducted, eventually covering the entire forest. A total of 21 archaeological sites have been recorded as a result of these surveys (Foster and Thornton 2001). An overview of the prehistoric archaeology of the forest was prepared for CDF by Gerike and Stewart (1988). A detailed analysis of surface-collected artifacts has been carried out by researchers from Sonoma State University (Haney 1993). A comprehensive overview that includes archaeological, ethnographic, and historical background research; a complete site inventory and evaluation; and specific management recommendations was subsequently compiled by Dillon (1995a).

Jackson Demonstration State Forest (JDSF) is located between Willits and Fort Bragg in Mendocino County. This 50,505-acre tract is the largest of the state forests administered by CDF. This property was purchased from the Caspar Lumber Company in 1947, and named after the company founder, Jacob Green Jackson. The environment of JDSF represents the coast redwood/Douglas fir forest type. The primary management goal of JDSF is to demonstrate sustained timber production while maintaining soil, water, wildlife, cultural, and recreational values. The initial cultural resource overview of the forest was prepared in 1978 through an interagency agreement with DPR (Levulett and Bingham 1978). This study resulted in the recording of 13 prehistoric sites, one ethnographic site, and one historic site. A more comprehensive inventory of historic resources was undertaken in 1991 documenting 172 resource locations (Gary and Hines 1993). This study focused on Euro-American period resources and provided JDSF with a useful document to achieve compliance with historic resource protection mandates. In a subsequent investigation, 18 of the 20 known prehistoric sites were reexamined and updated site records were prepared (Betts 1999). This study included a descriptive inventory, an integrity assessment, and management recommendations for the known prehistoric sites. Since 1978, at least 48 archaeological surveys have been conducted within JDSF. Most of these surveys have been for individual projects such as timber sale units. While a complete survey of the forest has not been undertaken, approximately 50 percent of the total acreage has received some archaeological coverage. These surveys have resulted in the identification of 49 archaeological sites and approximately 150 additional locations where minor historical features or artifacts have been documented. Two sites have received test excavations (Hylkema 1995; Layton 1990). The prehistory of the forest is not well known since few excavations have occurred. Prehistoric site types include villages, housepits, lithic scatters, midden, and ceremonial locations. Most of the historic sites are associated with early logging activities and include railroad grades, trestles, logging camps, isolated artifacts, two steam donkeys, a locomotive engine, and two standing structures (Foster and Thornton 2001). The historic utilization of the forest is documented in publications such as *Mallets on the Mendocino Coast* (Wurm 1986).

In November 2002, a major milestone was reached with the approval by the Board of Forestry of an updated JDSF Management Plan, although legal challenge to the EIR supporting the plan was

upheld in court, invalidating the plan approval. This plan was nearly six years in the making with input from a broad range of CDF staff, resource professionals, and concerned members of the public. The heritage resources sections of this plan specify comprehensive and highly detailed protection and mitigation measures, Native American consultation procedures, and a newly developed monitoring process to evaluate the effectiveness of these activities (CDF 2002). The heritage resource management proposals within this plan represent a synthesis of several different efforts. A preliminary heritage resource management plan was developed by John Betts and Dan Foster for incorporation into the larger document. A second management proposal developed for CDF by a private consulting firm proved to be unacceptable. A comprehensive record search was conducted by another private consultant at the Northwest Information Center. The final heritage resource management plan for JDSF will follow certification of a new EIR, a project currently in progress.

Kuchamaa Experimental Forest is a 2,040-acre parcel of state land situated along the Mexico-United States border in San Diego County. This property occupies the western flank of Tecate Peak, a mountain sacred to the Kumeyaay Indians who refer to it as Kuuchamaa (Shipek 1985). This property was bequeathed to CDF by W.Y. Evans-Wentz, a scholar and authority on Tibetan religion. According to his will, Cuchama and its surrounding lands were deeded to the State of California with the request that it be made a public monument to symbolize goodwill and fraternity between the races and faiths of the Occident and the Orient (Evans-Wentz 1989). Kuchamaa has been listed on the NRHP and its cultural importance has been documented by Mitchell and Welch (1990). An archaeological survey of a small portion of this property (Foster and Jenkins 1984) discovered a prehistoric site (CA-SDI-9969) near the summit of the mountain. This site provides a unique source of information for interpreting the cultural significance of the mountain.

Las Posadas State Forest encompasses 796 acres of oak and pine forest near the community of Angwin in Napa County. This property was bequeathed to the state in 1930 (Hastings 1985:5). Deed restrictions on the parcel have limited the management activities implemented by CDF. The forest has been subjected to a comprehensive archaeological survey by a team from Sonoma State University (Jablonowski, Martin, and Toriello 1995). This investigation included intensive background research that provided a context for the evaluation of the significance of the historic sites that were identified. Eighteen sites are known on the forest including four prehistoric sites, thirteen historic sites, and one site with both prehistoric and historic remains. The prehistoric sites consist of bedrock mortars and lithic scatters. Historic remains include cemeteries, mining sites, foundations, building pads, rock walls, a network of roads and trails, earthen dams, and a tree plantation. The forest also contains a forest fire station facility and a 4-H Club Camp.

Latour Demonstration State Forest is located in the southern Cascade Mountain Range approximately 50 miles east of Redding in Shasta County. This property was purchased by the state in 1946, and at 9,033 acres, is the second largest of the state forests. At least eight archaeological surveys have been conducted since 1983, resulting in nearly complete coverage of the forest. Only three archaeological sites have been found, two historic and one prehistoric, along with numerous isolated artifacts. The two historic sites consist of a small trash dump dating to the 1940s and the remains of a shake maker's camp. An archaeological survey of approximately 700 acres of the forest conducted by the ARP at CSU Chico resulted in the

collection of eight isolated artifacts including projectile points, a biface fragment, core, flake, hammerstone, and milling stone (Hamusek 1993a). A subsequent survey covering 4,000 acres of the forest failed to identify any archaeological sites, but did collect eight additional isolated artifacts including projectile points and a possible drill. The one prehistoric site on the forest (CA-SHA-1486) has been subjected to a test excavation by the ARP at CSU Chico (Huberland and Dwyer 2001).

Mountain Home Demonstration State Forest (MHDSF) is located in eastern Tulare County and contains 4,807 acres of beautiful giant sequoia forest. This property was purchased from a logging company in 1946 and is the third largest of the state forests. At least five archaeological surveys have been conducted covering nearly the entire forest. Thirty-six archaeological sites have so far been recorded, both prehistoric and historic. Five of the prehistoric sites have received archaeological test excavations. Historic sites include sawmills, early resort facilities, and historic sequoia stumps. A particularly interesting feature of MHDSF is the occurrence of a number of the enigmatic rock basin or "Indian Bathtub" sites. These features consist of enormous circular depressions in the natural bedrock. Their origin and use by Native Americans has been a topic of considerable interest for many years. Mention of several sites containing these features represents the earliest known archaeological investigation on the forest (Stewart 1929). Research on the history and archaeology of the forest was greatly expanded by Floyd Otter, the forest manager from 1953 to 1969. His highly readable book, *The Men of Mammoth Forest* (1963) provides a comprehensive account of the history of the forest and the surrounding region and a list of the historic and prehistoric sites that were known at that time. Archaeological surveys for timber sale projects added a number of sites to the forest inventory (Farris 1980b; Thornton 1979; Woodward 1982). Problems with the Headquarters Timber Sale provided an important incentive for the initial development of the CDF Archaeology Program. In 1982, a seasonal archaeologist was hired to conduct a survey of MHDSF. Over two field seasons, approximately 90 percent of the forest was investigated resulting in the discovery of 18 additional sites (Stangl and Foster 1984). In 1987, William Wallace received a contract to study the prehistory of MHDSF. Twenty-two previously recorded prehistoric sites were reexamined and trial excavations were conducted at five sites. Two reports describing these investigations were produced (Wallace 1993; Wallace et al. 1989). A major excavation has also been conducted at the Sunset Point site (Dillon 1992b). A report on the Enterprise Mill Historic Site (CA-TUL-814H) has been produced (Dulitz 1998). Subsequent recording work by Dan Foster and John Betts has rounded out the current inventory of known archaeological sites on the forest (Foster and Thornton 2001).

Two of the mysterious rock basins ("Indian Bathtubs") at Mountain Home Demonstration State Forest.

Mount Zion State Forest is located near Pine Grove in Amador County. This small forest comprises approximately 165 acres and contains an assortment of historic structures and sites.

The property making up the forest was acquired gradually through a series of transactions between 1928 and 1958. As a result of the CDF fire lookout and historic building inventories, the Mount Zion Fire Lookout Station and the Mount Zion Ranger Station Residence complex were documented (Thornton 1993, 1994). An archaeological survey of the forest (Betts 1995a) recorded three historic archaeological sites, one historic building, one historic linear feature, and two isolated artifacts, but no prehistoric resources were encountered.

Ellen Pickett State Forest is a 160-acre parcel located four miles south of Lewiston in Trinity County. The state acquired this property in 1939 as a public gift. An archaeological reconnaissance survey of the forest failed to identify any prehistoric or historic resources (Betts 1995b).

Soquel Demonstration State Forest is located approximately eight miles south of the city of Santa Cruz in Santa Cruz County. This 2,681-acre forest is dominated by coast redwood forest and is situated primarily within the east branch of the Soquel Creek watershed. This forest was subjected to a comprehensive archaeological survey that identified six archaeological sites including two prehistoric sites, three historic sites, and one multicomponent site (Dillon 1992a). One of these sites, CA-SCR-296, contains bedrock mortars and a cupule petroglyph boulder. This is only the second rock art site recorded in Santa Cruz County (OHP 1988) and represents a highly significant discovery. Extensive background research conducted for this project offered detailed interpretations for the other sites that were found. In 2003, two additional archaeological sites were discovered during preparation of the Fern Gulch Timber Harvesting Plan (THP 1-04-046 SCR) – a segment of an old road and a prehistoric archaeological site. The prehistoric site consists of bedrock mortars and cupules, the first such site discovered on the Forest north of Soquel Creek and one of only a few such sites yet recorded in Santa Cruz County.

Brian Dillon and survey crew at Soquel Demonstration State Forest in 1991.

Cupule petroglyph boulder discovered during Dillon's 1991 survey at SDSF.

In addition to the state forests, CDF owns or controls a variety of other properties across the state containing various types of facilities. Some of these properties contain cultural resources and have been the subject of archaeological investigations. The Intermountain Conservation Camp is located on an 80-acre parcel of state land near Nubieber in Lassen County. A survey of the entire property by a team from CSU Chico resulted in the identification of six archaeological sites and numerous features within the camp property (Foster and Thornton 2001).

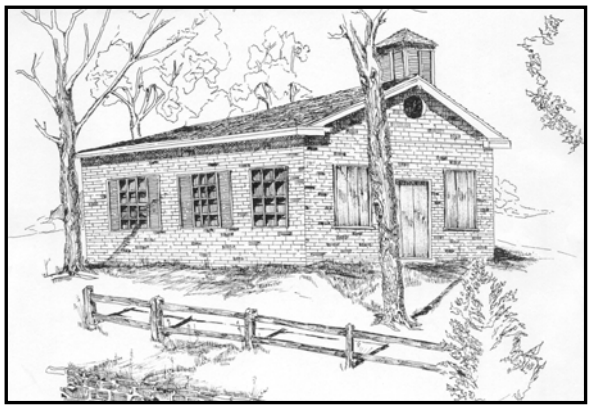
The Bautista Conservation Camp in Riverside County is located on a 240-acre parcel of state land surrounded by the San Bernardino National Forest. Archaeological surveys conducted on this property have identified seven archaeological sites consisting of rich artifact scatters indicative of ancient occupation areas (Foster and Thornton 2001). A survey by Foster and Jenkins (1985) prior to the construction of the camp covered approximately half of the property, recorded three sites, and reexamined four previously recorded sites.

Excavations

Many agencies in California include archaeology programs that frequently initiate limited archaeological test excavations or full-scale data-recovery efforts as a commonplace response to state or federal environmental protection laws. For several reasons, this is not the case at CDF. In the past two decades CDF has sponsored fewer than 25 archaeological excavation projects in spite of management work involving the review of over 10,000 individual projects with literally hundreds of potentially affected archaeological or historical sites during this same time period. Archaeological sites identified on CDF projects are usually protected through avoidance of project related disturbances. Timber operations, controlled burning, reforestation, or fuels reduction treatments can usually accommodate a flag-and-avoid solution, bypassing the cost and potential time delays associated with excavations for significance determinations or data-recovery. Construction of CDF Fire Stations and other facilities improvement projects often can not avoid sites and these projects have sometime resulted in excavation work. Opportunities for archaeological excavations have occasionally been realized on the State Forests, through encouragement to local university programs. On only three occasions has even limited funding been made available for significance evaluations – through archaeological excavation and analysis – for archaeological sites located within State Forests.

In general, most of these archaeological excavations have been undertaken for data recovery purposes in an effort to salvage information from highly threatened or damaged sites as a public service to the citizens of California or in direct response to requirements of CEQA. Volunteer assistance has been utilized to carry out these projects on several occasions. In a few cases, projects have been undertaken in emergency situations when funding was not fully in place, resulting in the fact that final reporting has not been fully completed. The following chapter discusses some of these excavations.

The Altaville Schoolhouse is located along Highway 49 just north of Angels Camp in Calaveras County. Constructed in 1858, this is considered to be one of the oldest and best preserved one-room schoolhouses surviving in the Mother Lode region and has long been recognized as one of the most historically significant structures in the CDF building inventory. This red brick structure has white trim, a gable roof, and a bell tower. It was used continuously as a school for nearly a century up



Altaville Schoolhouse, built in 1858.

until 1950 when the property was acquired by CDF and developed into the Altaville Forest Fire Station. The building became California Historic Landmark Number 499 in 1955 and was listed on the NRHP in 1979. In 1982, CDF proposed to remove and repair the badly deteriorated structure in order to improve station facilities. On April 20, 1982, CDF Archaeologist Dan Foster conducted an archaeological excavation adjacent to the building before it was moved. Seven artifacts were recovered from a one-by-one meter test unit excavated to a depth of 30 cm. After the building was moved a short distance to a land parcel in front of the station, additional excavations were conducted within the building foundation by a crew from the CDF Baseline Conservation Camp. These excavations produced 323 specimens including window glass fragments, cut nails, wire nails, horseshoes, wood and plaster fragments, slate pencils, chalk nubbins, fragments of blackboard slate, bottle fragments, crockery fragments, pieces of cut bone, and numerous other individual artifacts. In 1996, a report was prepared on the results of this study which included background history on the schoolhouse, a catalog and analysis of the artifact collection, and a compilation of documents related to the restoration efforts. The preservation of the Altaville Schoolhouse was a cooperative project between CDF, the Calaveras County Historical Society, the Calaveras County Board of Supervisors, the Angels Camp City Council, local industries and businesses, and many local residents (Napton and Greathouse 1997).

The Sugar Pine Conservation Camp is a minimum-security adult correctional facility located northeast of Redding in Shasta County. Nine archaeological investigations have been conducted on this parcel in response to the development and use of this facility. As a result of these investigations, four prehistoric archaeological sites and a segment of historic road have been identified. Test excavations were conducted at two of these sites (CA-SHA-1483 and CA-SHA-1484) by Shasta College prior to their destruction by grading for camp construction (Foster and Thornton 2001).

Layton's 1984 excavation of Housepit #3, Three Chop Village, JDSF.

During a tour of JDSF in 1984, Professor Tom Layton was shown Three Chop Village (CA-MEN-790) by CDF personnel. Professor Layton immediately recognized the importance of this site and returned with his staff from San Jose State University to conduct limited test excavations and anaysis. Three contact period house depressions were excavated resulting in the identification of three cultural components. The earliest component was interpreted as pre-Pomo and the later two as Pomoan occupations. An assemblage of stemmed points of Franciscan chert suggested a late persistence of this point form. A mid-nineteenth century component that included Chinese blue-on-white porcelain stoneware sherds and green bottle glass is believed to represent materials salvaged by Native Americans from the shipwreck of the *Frolic* near Point Cabrillo on July 26, 1850 (Layton 1990). The investigation of Three Chop Village was not related to timber harvest impacts, but was motivated by a sense of stewardship by CDF for this resource. The findings from these investigations have led to a veritable cottage industry of public presentations on the history and prehistory of Mendocino County.

An archaeological study of MHDSF conducted by William Wallace led to the development of a site typology and regional chronology for the area. Participants in these investigations included Barbara Baker, Dave Dulitz, Franklin Fenenga, Dan Foster, John Foster, Louise Hastrup, Mary Keith, George Kritzman, Mildred Kritzman, Don McGeein, John Manning, Virgil Meeker, Michael Sampson, Maurice Sloper, John Todd, Yvonne Viereckly, and Edith Wallace. Fieldwork was conducted between June 15 and July 15, 1987. Twenty-two previously recorded sites were examined, surface collected, and supplemented when necessary. Test excavations were conducted at five of these sites including Headquarters (CA-TUL-575), Sunset Point (CA-TUL-1052), Vincent Spring (CA-TUL-1053), Methuselah Rockshelter (CA-TUL-1058), and Methuselah (CA-TUL-1173). The tested sites were mostly shallow with sterile soil or bedrock encountered at a depth of 12 to 24 inches. The occupational debris found in these sites included obsidian flakes, fire-cracked rock, charcoal and ash, and a few stone artifacts. Two sites produced mammal bone fragments. Additional artifacts documented in the course of this study included potsherds, pestles, manos, projectile points, flaked stone tools, utilized flakes, hammerstones, and soapstone fragments. Diagnostic projectile points indicated an occupation range for the forest extending from 4000 B.C. to the late prehistoric period. A site typology was developed which included major base camps, temporary camps, and milling places (Wallace et al. 1989).

Wallace's 1987 excavations at Methuselah, MHDSF.

One of the sites excavated as part of the archaeological study of MHDSF was the Methuselah site (CA-TUL-1173). This site was first recognized because of the three large rock basins, or "Indian Bathtubs" that are located here. The site also contains a surface scatter of artifacts, bedrock mortars, milling slicks, and a midden deposit. This investigation was conducted over a four-day period in June of 1987 and included site mapping and the excavation of several five-by-five foot test units surrounding the outcrop containing the rock basins. Cultural deposits were found to extend from 20 cm to 51 cm in depth. Removal of soil from the rock outcrop revealed additional mortars for a total of 33 at the site. Artifacts recovered included brownware pottery sherds, projectile points, flaked stone tools, utilized flakes, flaked stone debitage, a steatite ornament and vessel fragments, a glass bead, a mano, an ocher fragment, and a quartz crystal fragment. This site was interpreted as a seasonal encampment occupied primarily during the late prehistoric period from A.D. 1300 to historic contact (Wallace 1993). The report of this investigation may have been one of the first published excavations of a southern Sierra Nevada rock basin site.

The Salt Creek Ridge Site (CA-TUL-472) is a high elevation prehistoric campsite in the southern Sierra Nevada that contains a surface artifact scatter, a substantial midden deposit, bedrock mortars, and rock basins. This site was heavily damaged by fire suppression activities during the 1987 Case Fire. The site was bulldozed by firefighters during the construction of a fuel break along a ridgetop. The bulldozer crew was aware of the site's location and attempted to avoid it,

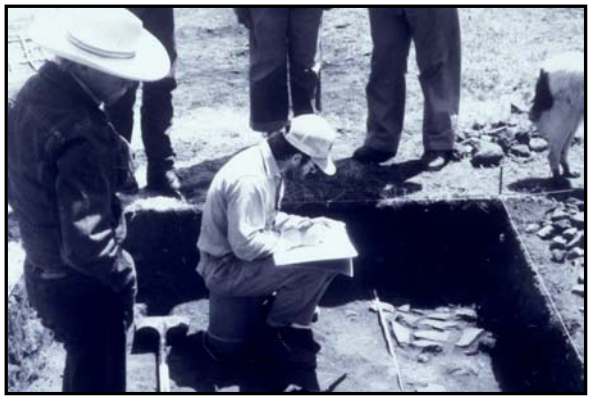
but a sudden change in fire behavior put the lives of the crew in jeopardy. The dozer operators were forced to create a large clearing to escape the flames, and in so doing, caused extensive damage to the archaeological site. CDF agreed to conduct a data recovery and rehabilitation project as partial mitigation for the impacts that had occurred. From September 22 to September 24, 1987, CDF Archaeologists Dan Foster and Richard Jenkins conducted an intensive investigation of the site including a systematic surface collection, site mapping, and a limited test excavation. Five two-by-two meter test units were excavated, the deepest extending to 30 cm. Artifacts recovered during this investigation included manos, metate fragments, a pestle, soapstone bowl fragments, ceramic pot sherds, obsidian projectile points, obsidian biface fragments, a basalt hammerstone, basalt cores, an obsidian drill, obsidian, basalt, and quartz flakes, and burned bone fragments. The projectile point types included four Desert Side-Notched series and one Rose Spring series. A granite outcrop at this site contains 12 bedrock milling features. Five large rock basins or the so-called "Indian Bathtubs" are located on an adjacent outcrop. Analysis of the materials recovered during this investigation suggested a late prehistoric occupation dating from A.D. 1300 to A.D. 1700. Even though this site had sustained extensive damage, it was still considered to be significant, and management recommendations were developed to protect the site from future impacts (Foster and Kauffman 1991).

Richard Jenkins recording archaeological field notes during CDF's 1987 investigation of the Salt Creek Ridge Site.

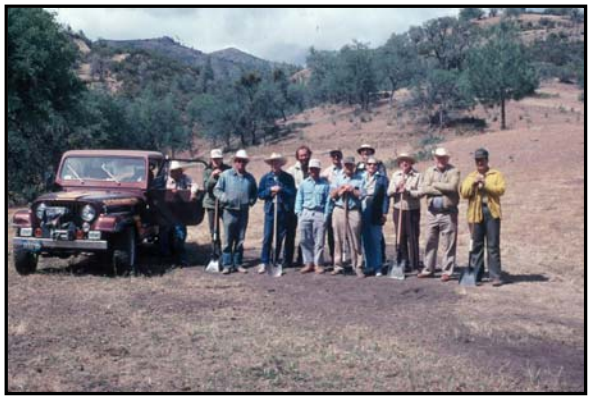
In July 1987, CDF Archaeologist Richard Jenkins conducted an inspection of a VMP project on the Lee Ranch in northern Tehama County. This investigation resulted in the identification of a prehistoric archaeological site situated on a small hilltop which was thought to represent a Late Period Yana hunting camp. The site was designated as the Bebensee Site and later received the trinomial CA-TEH-1490. Unfortunately, this site was severely impacted by heavy equipment operations during the controlled burn project. In March 1988, CDF contracted with the ARP at CSU Chico to conduct an archaeological investigation at CA-TEH-1490 as mitigation for the impacts that had occurred. The principal investigator for this project was Frank E. Bayham with Blossom Hamusek serving as the project director. The field crew included Sandra Flint, Lisa Swillinger, Daniel McGann, Daniel Eliott, Nancy Eliott, Nancy Garr, Curtis Whittaker, Michael Findlay, Jack Broughton, Steven Elmore, and Nettie Hoelscher. Fieldwork was carried out on April 9, 10, 16, and June 17, 1988. The primary objectives of this investigation were to assess the extent of damage that had been inflicted on the site, and to

Hamusek's 1988 excavations at CA-TEH-1490, a site impacted by CDF's VMP operations.

determine the cultural affiliation, function, and period of occupation of the site. These research objectives were addressed through detailed site mapping, a surface collection of diagnostic artifacts, an auger testing program, and the excavation of several test units. As a result of these investigations, the cultural deposit was found to extend from 50 to 70 cm in depth. A total of 1,621 cultural specimens were recovered including projectile points, bifaces, scrapers, cores, modified flakes, lithic debitage of predominantly basalt and obsidian, metates, mano fragments, and a hopper mortar fragment. Analysis of these materials suggested the predominant occupation of the site occurred during the Kingsley and Dye Creek Complex periods extending from A.D. 1 to A.D. 1300. Interpretation of these findings provided information to better understand the cultural chronology, flake stone technology, raw material procurement patterns, and settlement-subsistence practices of this little known region. The results of this investigation were published as volume Number 1 in the CDF Archeological Reports series (Hamusek 1988b).



John Betts recording a fire hearth encountered during excavations at the Corral Site.



Archaeological crew for excavations of the Corral Site, May 1988.

A limited test excavation sponsored by CDF was carried out at the Corral Site (CA-FRE-1346) over a three-day period in May 1988. This project was directed by CDF Archaeologists Dan Foster and Richard Jenkins with the volunteer assistance of Barbara Baker, John Betts, Carlos Farré, Frank Fenenga, Phil Hines, Jack James, Bill Johnson, Don McGeein, Fritz Riddell, Jarrod Smith, William Wallace, and Edith Wallace. The primary goal of this project was to mitigate inadvertent impacts resulting from the construction of a fire control line across the site in preparation for a controlled burn. CDF authorized limited funds to conduct test excavations in the vicinity where the fireline crossed over the site. A research design was developed that addressed basic questions such as site age, function, tribal affiliation, and significance. A total of three test units were excavated that produced a wide range of cultural materials including flake stone artifacts and debitage, ground stone artifact fragments, shell and bone artifacts, numerous faunal remains, large quantities of fire-affected rock, and two hearth features. Five radiocarbon samples returned a series of dates ranging from 400 ± 40 B.P. to 1060 ± 70 B.P. This study resulted in the determination that the impacts to the site were relatively minor as they were restricted to the surface. Subsurface components of the site were found to be intact and contain a wealth of information concerning the Late Period inhabitants of the western San Joaquin Valley and southern Diablo Range. This project was instrumental in the formation of COALARG. A report on this excavation was presented at the SCA annual meeting in 1992 and later published in the CDF Archaeology Reports series (Jenkins 2001).

The Dad Youngs Spring site (CA-PLA-689) is a major prehistoric village located along an east-west trending ridge on the west slope of the Sierra Nevada. This site is associated with a perennial spring and contains a surface scatter of flaked and ground stone artifacts, a rich midden deposit, and seven bedrock mortar features. Between October 2 and October 6, 1989, an investigation was conducted at this site under the direction of CDF Archaeologists Dan Foster and Richard Jenkins, with the volunteer assistance of Fritz Riddell, Don McGeein, Brad McKee, Lissa McKee, and John Betts. This investigation was conducted to determine the full extent of the site area, make a preliminary significance assessment, prepare a complete site record, and evaluate the effects of proposed logging operations. Artifacts encountered during this investigation included manos, metates, pestles, a portable mortar, steatite bowl fragments, numerous projectile points, bifaces, drills, gravers, scrapers, cores, utilized flakes, and debitage. The projectile point types ranged from early Martis series to Desert Side-Notched series. A one-by-two meter test unit was excavated to a depth of 120 cm. Within this unit, two pestles were found side by side, surrounded by a concentration of fire-cracked rocks, and associated with two soapstone dart shaft straightener fragments. This site had been heavily damaged by a site preparation project in 1977 which exposed the area to extensive vandalism. At least 13 large relic hunter pits ranging from 1 to 5 meters in diameter and up to 2 meters deep were observed during the 1989 investigation. In spite of the extensive damage that had occurred, the site was still found to have intact deposits, and was considered to be an extremely important and significant site. This investigation was documented in an Archaeological Site Record on file at the North Central Information Center. In 1996, a law enforcement operation was undertaken in an attempt to curtail the destructive vandalism that had continued to occur at this site, but the operation was unsuccessful in apprehending the culprits.

Dad Youngs Spring site excavation crew, 1989.

The McCloud Forest Fire Station is located in Squaw Valley south of Mt. Shasta in Siskiyou County. This three-acre parcel of land was donated to the state by Champion Lumber Company for the purpose of constructing a new fire station. A survey of the property prior to construction identified an archaeological site (CA-SIS-1608) consisting of a sparse lithic scatter covering nearly the entire property (Hines 1990a). It was determined that construction of the fire station would result in direct negative impacts to the site, and consequently, CDF contracted to the ARP at CSU Chico to conduct a

Richard Jenkins backfilling units during 1991 excavations at CDF's McCloud Forest Fire Station.

Phase II investigation to evaluate site significance and propose appropriate mitigation measures. Dr. Frank E. Bayham was the principal investigator with Blossom Hamusek directing the fieldwork and subsequent analysis. The field crew included Daniel McGann, Nancy Garr, and Dina Coleman. Fieldwork was performed over a six-day period on May 30 and 31, June 20-22, and July 18, 1991. Investigations included site recording and mapping, surface collection, augering, eight one- meter-square excavation units, and artifact analysis. Artifacts recovered included bifaces, cores, edge modified flakes, lithic debitage, and one mano. An assortment of contemporary and historic materials was also recovered. The average depth of the deposit was 65 cm, but cultural materials were found to a maximum depth of 100 cm. Analysis of the cultural materials suggested that the site represented a temporary field camp operating as part of a seasonal procurement schedule. Occupation of the site fell within a time span from as early as 5150 B.P. to as late as 895 B.P. with an intensive period of utilization around 1710 B.P. Although the investigations found that the site contained important archaeological information, a proposal was developed to cap the site so that construction activities could go forward (Hamusek 1993b). The new fire station was completed in 1992.

Dillon's 1991 excavations at Sunset Point, MHDSF.

An investigation of the Sunset Point site (CA-TUL-1052) in MHDSF was undertaken to determine the significance of the site and to evaluate impacts occurring because of a modern public campground at this location. Test excavations were carried out over a five-day period from August 5 through 9, 1991. Principal Investigator Brian Dillon was assisted by Francis Riddell as project field director and field crew members Eulogio Guzman, Marilyn Holmes, and Don McGeein. CDF staff members Dave Dulitz, Lloyd Stahl, Mary Crouser, Scott Robinson, Eric Huff, and Sandy Campbell also participated in the excavations. The Sunset Point site consists of a major high-elevation campsite. It is situated in a gently sloping swale between a rounded knoll and a large granite outcrop overlooking a perennial stream. The granite outcrop contains 17 large rock basins or "Indian Bathtubs" and a concentration of 19 bedrock mortars. The site also contains a surface artifact scatter, housepits, and a dark midden deposit. Artifacts found at this site include flaked stone tools such as projectile points, bifaces, scrapers, cores, and utilized flakes; ground stone tools such as manos, metates, and pestles; and other cultural materials including pottery sherds, hammerstones, steatite vessel fragments, and fire-cracked rock. Ten one-meter-square test units were excavated during the 1991 investigations. Cultural deposits were found to extend to more than 1.5 meters in depth. These excavations identified a late prehistoric occupation dating from A.D. 1300 to A.D. 1800 overlying a deeply buried deposit extending back to the Early Archaic Period. A radiocarbon assessment of a charcoal sample from the 125 to 132 cm level yielded a result of 8,130 ± 60 years B.P. This represents one of the earliest known archaeological sites to have been documented in the southern Sierra Nevada. As a result of these findings, and the excellent state of preservation, the Sunset Point site was considered to be of utmost scientific and humanistic significance. The discovery of deeply buried cultural deposits that were not indicated by surface evidence was thought to have important implications for other presumably late period sites in the region. Recommendations

were provided to reduce impacts to the site in order to ensure its long-term preservation (Dillon 1992b). The campground that was causing impacts to the site has since been closed and an interpretive trail has been developed which leads visitors through the site area where they can learn about the prehistory of the forest and the results of the 1991 excavations (Foster and Thornton 2001).

During the summer of 1992, San Jose State University conducted an excavation at an important late prehistoric/early historic Coast Yuki village site on Lincoln Ridge, near Westport, California. This site was first discovered and recorded by RPF Brian Bishop during preparations for a THP. Bishop also served as an intermediary between Louisiana-Pacific Corporation and the excavation team to facilitate the research. This project was carried out as a summer archaeological field school and provided information that led to a more complete picture of prehistory and history on the Mendocino Coast.

The historic site known as Misery Whip Camp (CA-MEN-2296/H) is located on JDSF within the Caspar Creek drainage. Potential impacts from timber harvest operations necessitated an archaeological investigation. Due to the topography and proximity of yarding equipment, the site could not be protected by avoidance. A test excavation was undertaken in 1995 to determine the age and function of the site in order to evaluate its historical significance and to recover information as mitigation for unavoidable impacts. The project was carried out by Mark Hylkema through an interagency agreement with San Jose State University. Site features included a camp cooking facility, a blacksmith work station, a crib dam, and several foundation platforms. Artifacts recovered included extensive kitchen ware ceramic fragments, "penny pipes", glass bottle fragments, melted glass, bricks, square iron spikes or nails, and a variety of metal tools and hardware. Ceramic makers marks and bottle fragments appeared to date the site between 1880 and 1900. Historic research suggested that the crib dam may have been constructed in the 1870s (Hylkema 1995). This site may have been one of the earliest logging camps on the forest, predating the railroad logging era. The evidence from this site suggested early logging technology utilized oxen yarding and "splash dam" transportation to the sawmill. This investigation was a rare example of management other than protection through avoidance or alteration of project design (Foster and Thornton 2001).

Two summers of excavations were carried out on the Zeni Ranch in Mendocino County by students from San Jose State University under the direction of Professor Tom Layton. These investigations were reported in a Master's thesis by Patricia Dunning (1996). This study described the prehistory of the region from the vantage point of the Zeni Ranch and represents a pioneering statement of Coast-Interior archaeological connections based on prehistoric commerce. This research was initially facilitated by CDF Forester Jim Purcell.

A recent case with important implications for the CDF Archaeology Program was the Murphys Forest Fire Station project. A two-acre parcel of land was purchased along Highway 4 in Calaveras County to construct a new fire station. This parcel was situated on a rounded knoll above a small drainage just west of the property. The Department of General Services (DGS) oversees state projects that involve capital outlay or real estate transactions. DGS, in partnership with CDF, administered the contracts for the needed archaeological work. A survey of the parcel identified a prehistoric archaeological site described as a sparse lithic scatter. The full extent of

the site area could not be determined because of heavy ground cover but the site seemed to possess relatively minimal cultural materials (Neuenschwander 1995). A Phase II testing program conducted by Peak and Associates (1996) was undertaken to determine the areal extent and depth of the site. This testing demonstrated that the site was much more extensive than was indicated by the surface distribution of artifacts, had depth, and appeared richer and more complex than originally perceived. Lithic tools, cores, and debitage, as well as historic period artifacts were recovered. Since avoidance of the site by the construction of the planned fire station would not be possible, excavation and interpretation were proposed as mitigation measures. A contract was awarded to EIP Associates for $250,000 to conduct a Phase III data recovery excavation to mitigate the loss of the archaeological values prior to impacts from construction. Jeannette McKenna was the principal investigator for the excavations that were conducted in the fall of 1996 (EIP Associates 1997). Members of the Calaveras Band of Miwuk Indians served as monitors and consultants during the excavation. These excavations and subsequent surface collections produced over 5,000 artifacts. The majority of these materials consisted of lithic debitage, but bifaces, cores, and modified flakes were also recovered. Additional artifacts were revealed during monitoring of construction activities including nearly 100 ground stone artifacts and several hundred glass trade beads (McKenna 1998). Monitoring continued during construction in 1999 and two additional test units were also excavated (McKenna 1999).

The archaeological investigations initiated by DGS were fraught with problems leading to repeated delays and cost overruns. The excavations were poorly planned and supervised, and caused numerous problems with local Native Americans hired to monitor the construction, and with Caltrans archaeologists reviewing utility right-of-ways. The archaeological reports submitted for this project did not meet basic standards for archaeological reporting (EIP Associates 1997; McKenna et al. 1998) and were rejected by CDF. The CDF Archaeology Office had to stipulate explicit criteria for additional reporting. The poor performance of the archaeological contractor threatened to derail the entire project and delayed construction of the new fire station for nearly three years. In 1998, CDF Regional Archaeologist Linda Sandelin was assigned to supervise the archaeological component of this project. Over a four-month period she served as the CDF liaison with DGS, the contract archaeologist, local Native Americans, and Caltrans. Her capacity to make on-site decisions resulted in the resolution of numerous disputes, and the new Murphys Forest Fire Station was finally completed in 1999.

Location where construction activities at Hurley FFS unearthed numerous beads and other evidence indicating the presence of an archaeological site.

The Hurley Forest Fire Station is located on a parcel of state land near Auberry in Fresno County. When this station was originally constructed in 1949, it was placed upon a prehistoric archaeological site which has subsequently been designated CA-FRE-2240. This site consists of an Indian village containing bedrock mortars, a midden deposit, an obsidian lithic scatter, and hundreds of steatite and split-

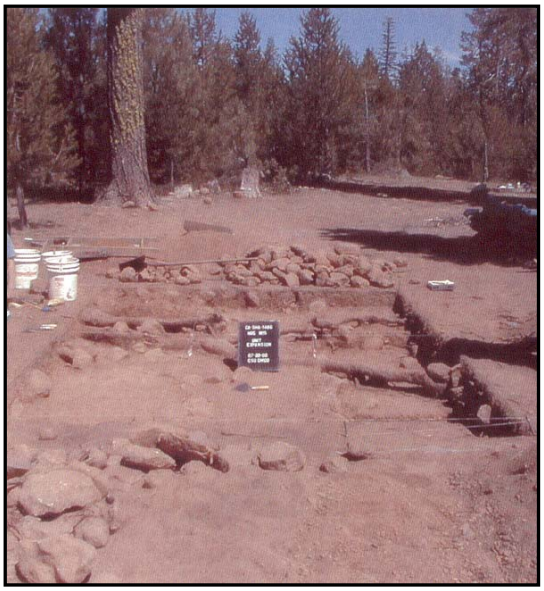
punched olivella beads (Foster and Thornton 2001). A proposal to upgrade facilities at this station led to an intensive archaeological investigation by the CSU Stanislaus Foundation. The purpose of this study was to determine the significance of the portions of the site to be affected by the proposed construction through the sampling of subsurface deposits. Field studies were conducted by Principal Investigator L. Kyle Napton and Elizabeth Greathouse with the assistance of field crew members Cynthia Gourley, Jonna Nunes, Bill Ray, Eric Schaffer, Stan Strain, and Kelley Tricarico, from January 6 to 14, 1999. A variety of excavation techniques were employed including manual, mechanically assisted, and backhoe excavations. The prehistoric artifact assemblage included projectile points, steatite beads, steatite vessel fragments, utilized flakes, cores, a scraper, ground stone fragments, polished bone fragments, bone awl fragments, a bone bead, a shell bead, a potsherd, and obsidian, basalt, chert and other types of debitage. Intrusive materials in the deposit including blasting caps, shell casings, wire nails, and glass fragments, provided an indication of the thoroughly disturbed composition of the cultural deposit. This study concluded that the portions of the site to be impacted by the proposed construction would have no significant effect on the cultural resource values of this site (Napton and Greathouse 1999).

Napton's 1999 excavation at Ishi Conservation Camp during heavy rain.

The Ishi Conservation Camp is located near Paynes Creek in northern Tehama County. This camp is situated on a 110-acre parcel that was purchased by the state in 1956. A large multicomponent archaeological site within the compound has been designated as the Ishi Plum Creek Site (CA-TEH-1621/H). This site straddles Plum Creek and consists of a developed mound, midden deposit, obsidian flakes, bifaces, projectile points, and evidence of a historic homestead (Foster and Thornton 2001). Proposed underground construction activities prompted an archaeological investigation of this site by the Institute for Archaeological Research at CSU Stanislaus. The field crew was supervised by Principal Investigator L. Kyle Napton, Elizabeth Greathouse, and Field Supervisor Bill Ray and included Eric DeSelms, Tammy DeWitt, Paula Echebarne, Cynthia Gourley, Mark Kile, Jonna Nunes, Tony Rocha, Kelly Tricarico, Yvonne Villaneuva, and Gabriella Visola. This investigation was conducted on April 6 through 7, and June 2 through 3, 1999. The purpose of this investigation was to determine the depth and extent of the portion of the site to be affected, the qualitative and quantitative composition of the subsurface assemblage, the source of lithic materials, and the potential age of the archaeological deposit. Four one-by-one meter units were excavated. The rich assemblage of prehistoric and historic cultural materials recovered as a result of these excavations demonstrated that portions of this site retained sufficient integrity to be considered significant (Napton and Greathouse 2000).

Only one prehistoric archaeological site (CA-SHA-1486) has so far been identified within Latour Demonstration State Forest. This site consists of a sparse surface scatter and shallow deposit of flaked and ground stone artifacts situated on a stream terrace surrounded by mixed conifer forest. When this site was initially recorded in 1983, it was thought to be largely destroyed and of little

value because of its location within a modern campground. A subsequent investigation of the site (Hamilton and Neri 1997) discovered additional artifacts and recognized the potential for buried cultural materials. These observations prompted a proposal for a more intensive investigation of this site. In 2000, test excavations were conducted at CA-SHA-1486 by the ARP at CSU Chico. This investigation was conducted over a two-week period during the summer of 2000. This project was motivated by a proposal to install a vault toilet in the Butcher Gulch Campground as well as a need to evaluate site impacts resulting from ongoing campground use. The investigation included surface examination and collection, mapping, surface test units, excavation units, large exposures, and artifact analysis. Materials recovered included mano and metate fragments, projectile points, bifaces, edge modified flakes, obsidian and basalt debitage, and one obsidian core. A layer of volcanic cobbles 10 cm below the ground surface limited the depth of the cultural deposit. Analysis of the recovered materials and a collection of the isolated artifacts found on Latour Demonstration State Forest indicated occupation of the forest from the Early Archaic through Emergent Periods, with the most intensive use occurring during the Upper Archaic. The discovery of a substantial ground stone component suggested that CA-SHA-1486 may have been occupied by complete family groups during certain time periods. While the test excavations demonstrated that the site had the potential to yield important information, it was felt that this study realized most of that potential (Huberland and Dwyer 2001).



Layer of volcanic cobbles found during excavations at Latour Demonstration State Forest in 2000.

Private Collections

In the course of the many types of archaeological investigations undertaken by CDF, opportunities have occasionally arisen to record private artifact collections. While many professional archaeologists maintain a justifiable disdain for amateur artifact collectors, the CDF Archaeology Office has taken a pragmatic and proactive position, recognizing the potential scientific value of these collections. Private landowners often occupy their properties for many years and have the opportunity to witness objects being exposed through natural and cultural processes that would not be possible for professional archaeologists. In order to take advantage of these findings, the CDF Archaeology Office has attempted to systematically document these collections when they have been encountered. These documentation efforts have typically consisted of site recording and photographs of the artifacts which have sometimes been mounted in displays. The following accounts represent a few examples of the private collections documented in the course of CDF investigations.

An archaeological survey in preparation for a CFIP project was conducted in 1982 on portions of the Enke property in Shasta County. A very large but diffuse lithic scatter was encountered that

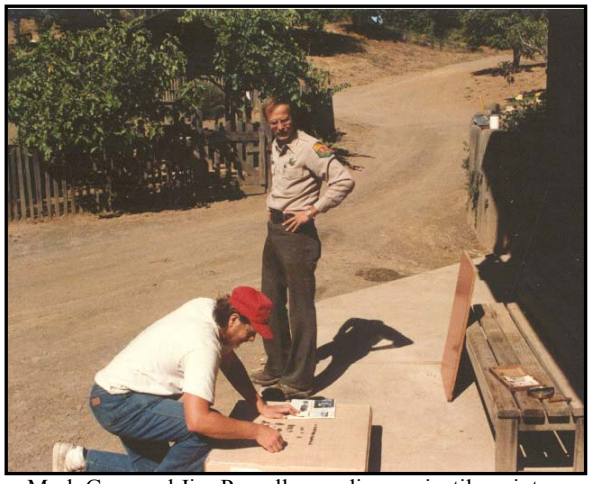
extended over most of the property. The landowner possessed a collection of approximately 1,000 artifacts that had been gathered over a 25-year period. Due to this intensive collecting, observable surface remains were limited to thinly scattered flakes and point fragments. The landowner's collection of obsidian projectile points, bifaces, drills, and scrapers was documented in photographs. Many of the projectile points were of the Gunther Barbed series. Two chert projectile points and two mano fragments were also in the collection.

Large collection of artifacts recorded during review of the 1982 Enke CFIP project in Shasta County.

A collection of surface finds from CA-PLU-358 was photographed by amateur archaeologist Rick Trumm in 1985. This collection included 13 basalt projectile points and one obsidian projectile point. In 1986, a site record was submitted to CDF by Rick Trumm and Janet Nelson for a site in the Plumas County section of Sierra Valley. This site contained three bedrock mortar features and a light lithic scatter. A mano, pestle, and two projectile points were documented. In 1987, Trumm and Nelson submitted a site record to CDF for the Manix Beach site (CA-SBR-223) in San Bernardino County. This extensive site appeared to be a large quarry area. A collection of approximately 20 artifacts was documented in a series of illustrations and photographs.

One of the large bifaces and preforms recorded from the Manix Beach quarry site.

CDF Forester Jim Purcell facilitated the recording of the Zeni Ranch site (CA-MEN-2136) in 1987. This prehistoric village is situated on a major ridge midway between the coast and interior valleys of Mendocino County. A midden deposit covers nearly two acres on a flat above a spring. The landowner, Mr. George Zeni, possesses a large collection of artifacts recovered from this site. The collection includes approximately 150 projectile points manufactured from obsidian, Franciscan chert, and Monterey chert. Also in the collection were several large obsidian bifaces or ceremonial blades, sandstone pestles, mortars, and metates. This proved to be one of the most remarkable collections ever encountered in this area. The landowner's grandfather remembered Indians camping on the ranch around 1890-1910. This



Mark Gary and Jim Purcell recording projectile points from the Zeni collection in 1987.

investigation led to a systematic surface collection and test excavation of the site by San Jose State University reported in a Master's thesis (Dunning 1996).

In 1988, a preharvest inspection was conducted for a THP on the Cloud Ranch overlooking Goose Lake in Modoc County, an area rich in archaeological sites. The Clouds were very knowledgeable concerning the archaeological sites on their ranch. During the inspection, an enormous archaeological site was encountered in the Fandango Valley area consisting of an extensive obsidian lithic scatter and numerous rock ring features. The Clouds also possess a collection of approximately 275 artifacts that includes obsidian projectile points in a broad range of styles, bifaces, crescents, milling stones, and bola stones. This collection was documented in a series of photographs.

In 1991, a large prehistoric village site (CA-MEN-2547) in Potter Valley was recorded by Dan Foster and Mark Gary. This site may have been the ethnographic Pomo village of "Seel." The artifacts in the possession of the landowner, Mr. Cedric Thornton, were one of the most impressive private collections ever encountered in Mendocino County. Mr. Thornton recounted the existence of a large earthen mound, approximately 70 meters in diameter and 2 meters high, that was situated on a level stream terrace near the confluence of two creeks. This mound was leveled in 1951 when the land was developed for a large pear orchard. Mr. Thornton began collecting the cultural materials as they were exposed. He also observed a cache of nested abalone shells. The collection he possesses contains thousands of glass trade beads, magnesite cylinders, and cylinder beads; several hundred complete projectile points, drills, bifaces, scrapers, choppers, ceremonial blades, and core tools of obsidian and chert; pestles, manos, metates and stone bowls; schist and soapstone pendants, stone pipes, charmstones, complete Haliotis shells and ornaments, clam shell disc beads, bone awls, grizzly bear teeth, an incised stone, a bear track shaped ornament, an incised bone tube or flute with bone mouthpiece, and square nails. This tremendous collection was documented in a series of photographs.

Dozens of complete pestles, mortar bowls, and other groundstone artifacts recorded in the Thornton collection, Mendocino County.

COALARG team members recording the Charlie Akers collection in 1990.

One of the primary objectives in the formation of COALARG was to document private collections. As a result of public outreach efforts by COALARG members, several private collections from sites in the region were acquired and cataloged. One of these was the Louis Deford collection. In February 1992, these collections were formally donated for permanent

curation and display to the Baker Museum in Coalinga. The Charlie Akers collection was also documented as part of COALARG investigations (Hylkema 2001).

One encounter with a private collector resulted in a less positive outcome. In the early 1990s, CDF Forester Larry Blackman provided a tip to CDF Archaeologist Dan Foster that a neighbor of his had a large collection of prehistoric artifacts. Blackman arranged for a meeting by assuring his neighbor that Foster was not the sort of archaeologist that would turn him in but often worked with private collectors in a productive way. Foster approached the situation with an open mind, met the neighbor, and viewed a massive collection which contained thousands of projectile points, beads, and many other artifacts collected from Shasta County and other locations throughout northeastern California. An attempt was made to persuade this relic hunter to stop digging and start documenting his collection with the hope of converting him into a more responsible amateur archaeologist. About this same time, Foster conducted an archaeological survey on property in nearby Tehama County for a CFIP project, and encountered something odd. Near the landowner's house were massive collections of artifacts on display, and some of these, such as legged metates were obviously collected from regions outside of California. Both the CDF forester and the RPF hustled Foster away from the displayed artifacts and back to the nearby CFIP project for fear we had encountered something outside our authority. As it turned out, although this landowner was a former president of the local historical society, it was apparent from the extensive volume of illicitly obtained artifacts seen on the property that he was a pothunter and probably engaged in antiquities trading. Foster later learned that this landowner and the Shasta County neighbor were friends and they probably dug-up sites together. Both of these men were subsequently apprehended on the Lassen National Forest digging in a prehistoric archaeological site on federal lands, and were arrested for violations of the Archaeological Resource Protection Act (ARPA). They were observed by Forest Service personnel and caught with artifacts in their possession. This turned out to be an important ARPA case with Foster providing depositions for the prosecution. This case was eventually settled. The Shasta County neighbor pled guilty to lesser charges and was directed to donate his collection to a public institution. He later claimed to have disposed of the entire collection in a dumpster somewhere near Davis, California.

CDF Archaeologists examining the Archie Brown collection in 2003.

In 2003, CDF archaeologists had an opportunity to examine the artifact collection of the late Archie Brown. Historian Bob Colby made arrangements with Mrs. Romayne Brown to examine this collection. Archie Brown was a rancher near Vina in Tehama County, who became interested in Indian artifacts early in life. Most of his collection came from the vicinity of the family ranch. Local farmers would notify Archie when they were plowing their fields and he would walk behind the equipment to recover the artifacts that were unearthed. Additional artifacts were collected in the Deer and Mill Creek canyons. During the brief examination by CDF staff, 757 ground stone artifacts were counted, including 447 stone bowls or mortars, 133 pestles, 141 shallow hopper mortars, 10

metates, and 26 manos. Also in the collection was a bedrock slab with seven mortars, an unusual three-sided mortar, an incised stone bowl fragment, net weights, and a large rock encircled with a groove. Most of the ground stone artifacts were manufactured from vesicular basalt, andesite, sandstone, and other rocks of local origin. The Brown collection also includes projectile points, arrow shaft straighteners, charmstones, small paint mortars, stone and shell beads, a bone awl, and an assortment of historic artifacts such as ox shoes, spades, bear traps, firearms, a lock, and two large Chinese stoneware jars. Mrs. Brown asserted that most of this collection was gathered locally, although from a number of different sites (Foster, Sandelin, and Fenenga 2003).

Private archaeological collections have played a long-standing role in the study of California prehistory. The earliest comparative analyses, as well as some of the first regional syntheses, were developed with the aid of large private collections (Gifford and Schenck 1926; Holmes 1900; Schenck and Dawson 1929). The analysis of private collections was also incorporated into the development of the Central California Taxonomic System, which has become the theoretical framework for central California prehistory (Lilliard, Heizer, and Fenenga 1939; Beardsley 1948, 1954; Bennyhoff and Frederickson 1994). It could be argued that archaeological materials collected by amateurs without the use of scientific methods have little or no value because the context of their discovery has been lost. There are, however, many different components of scientific research, and certain aspects of amateur collections make them suitable for comparative studies. Archaeological excavations typically produce only a small sample of artifacts of the quality that are often found in abundance in private collections. The small size of scientifically recovered collections often limits the statistical reliability of the analytical results that can be achieved. The large quantities of finished stone tools found in private artifact collections offer the possibility of constructive forms of investigation and analysis. The potential research value of private collections has motivated the documentation of these collections when they have been encountered during CDF archaeological investigations.

CDF forester examines private artifact collection during a PHI on the Byers property in Del Norte County.